Universidad Autónoma del Estado de Hidalgo

Escuela Superior Huejutla

Área Académica: Licenciatura En Sistemas Computacionales

Tema: UML Concept

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Periodo: July / December/2011

Keywords. UML / Systems Modeling

- Tema: UML Concept

Abstract

Unified Modeling Language
It is a communication tool or notation with its own symbols for system modeling.
It is a methodology, so it does not show the order of steps for developing OO applications.

UML is the standard of the leading companies in the world (Microsoft, HP, Oracle). Until recently it was an advantage, today is a necessity.

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- ## UML Concept

- UML (Unified Modeling Language) is a language for modeling, constructing, and documenting the elements that form an object-oriented software.

  Unified Modeling Language (UML) is a standard of OMG (Object Management Group) that describes several diagrams for modeling software systems using object-oriented techniques.

UML Models

UML models discussed in this part are:

•Use case diagram
•Class diagram (including objects)
•State Diagram (Statechart) "activity diagram
•Sequence Diagram
•Collaboration Diagram
•Component Diagram
•Deployment diagram

Class Diagram

- Displays a collection of declarative modeling elements (static), such as classes, types and their contents and relationships.

- Priority: High.

Component Diagram

- Represents the components of an application, system or enterprise. The components, their relationships, interactions and their public interfaces.

- Priority: Medium

Composition Structure Diagram

- Represents the internal structure of a classifier (such as a class, component, or a use case), including points of interaction with other parts of the classifier system.

- Priority: Low

• Physical Deployment Diagram

- A physical deployment diagram shows how and where to deploy the system. Physical machines and processors are represented as nodes and the internal construction can be represented by nodes or embedded devices. As artifacts are located in the nodes to model the deployment of the system, the location is guided by the use of deployment specifications.

- Priority: Medium

Object Diagram

- A diagram shows the objects and their relationships at a point in time. An object diagram may be considered as a special case of a class diagram or a communication diagram.

- Priority: Low

Activity Diagram

•Represents business processes high-level skills, including data flow. It can also be used to model complex logic and / or parallel within a system.

•Priority: High

Communication Diagram (formerly: Diagram of collaborations)

- It is a diagram focused on the interaction between lifelines where the architecture is central to the internal structure and how it corresponds with the passage of messages. The sequence of messages is given through a system of numbered sequence.

- Priority: Low

Diagram Interaction Review

- Diagrams Interaction Review focus the review of flow control, where the nodes are interactions or interaction occurrences. Life Lines posts not on this level of review

- Priority: Low

Sequence Diagram

- A diagram that depicts an interaction, putting the focus on the sequence of messages exchanged, along with their corresponding event occurrences on lifelines.

- Priority: High

State Machine Diagram

•A State Machine diagram illustrates how an item, often a class, you can move between states to classify their behavior, according to transition triggers, guards, restrictions and other aspects of the State Machine diagrams, which represent and explain the movement and behavior.

•Priority: Medium

Timing Diagram

- The primary purpose is timing diagram showing changes in the status or condition of a lifeline (representing a Classifier Instance or a role of a classifier) over linear time. The most common use is to show the change of state of an object over time in response to accepted events or stimuli. Events that are received are recorded, as shown when you want to show the event causing the change in the condition or state.

- Priority: Low

- # Use Case Diagram

- A diagram shows the relationships between actors and the subject (system), and use cases.

- Priority: Medium

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